

Amendments to the Specification:

Please replace the paragraph at page 7, lines 5 through 9 with the following amended paragraph:

It should be appreciated that while a preferred embodiment of the present invention is illustrated in connection with wireless communications devices using OFDM, it is contemplated that the present invention is also suitably used in connection with wireless communication devices using other multi-carrier modulation techniques, including but not limited to frequency division ~~multiplexing~~ multiplexing (FDM).

Please replace the paragraph at page 9, lines 11 through 25 with the following amended paragraph:

The present invention modifies the process described above, and will now be described with particular reference to the flow diagram shown in Fig. 3. A first communication device C1 desiring to communicate with a second communication device C2 first determines which sub-carriers are unsuitable due to interference in proximity to C1. In this regard, in step 50, C1 tests for interference by sampling the RF channel using the Analog-to-Digital Converter (ADC) and, in step 52, converts this data to the frequency domain using an FFT algorithm or other suitable spectral analysis algorithms. In step 54, an energy detector and processing means for evaluating the energy level of each sub-carrier are used to determine which sub-carriers are usable (i.e., are not subject to interference). In this regard, the energy levels are analyzed in accordance with a predetermined threshold energy level. Those sub-carriers which have an energy level above the predetermined threshold energy level are determined to be unusable sub-carriers. Thus, C1 will not desire to communicate using these sub-carriers. If C1 deems that not enough sub-carriers are available for reliable

communication it will delay transmitting data until C1 detects less interference in the channel or reduces its data rate to make the link more robust.

Please replace the paragraph beginning at page 9, line 25 through page 10, line 1 with the following amended paragraph:

In accordance with a preferred embodiment of the present invention, a bitmap is generated which is indicative of usable and unusable sub-carriers. For instance, in the case where there are 48 possible sub-carriers, the bitmap is comprised of 48-bits, each bit indicative of whether a respective sub-carrier is usable or unusable (e.g., bit = 0 = suitable sub-carrier; bit = 1 = unsuitable sub-carrier). Fig. 4 illustrates a 48-bit bitmap comprised of bits 0 through 47. ~~[[The]]~~In step 56, the generated bitmap is transmitted to C2. Since it is unknown to C1 which sub-carriers are unusable to C2 (and thus subject to interference in proximity to C2), the bits comprising the bitmap are transmitted to C2 using a plurality of sub-carriers (including those which may not be suitable for reception by C1, since they may be suitable for reception by C2).

Please replace the paragraph beginning at page 10, line 26 through page 11, line 6 with the following amended paragraph:

Returning now to Fig. 3, C2 will receive the bitmap and analyze the received data to identify which of the sub-carriers is unsuitable for C1 (step 60). In addition, C2 analyzes its own noise conditions to determine which sub-carriers are unsuitable due to interference in proximity to C2 (steps 60-64). A new bitmap is generated which is indicative of which sub-carriers are suitable and unsuitable for both C1 and C2 (step 66). If the new bitmap is identical to the one received by ~~C2~~than C2, then only an acknowledge signal needs to be sent

to C1 using the agreed upon set of sub-carriers (step 66). If a different bitmap is generated, it is then transmitted by C2 to C1 in the same manner as the first bitmap was transmitted from C1 to C2, as described above. In this regard, the two devices have agreed on which sub-carriers to use for communication based on the interference detected at both devices. As indicated above, some of the sub-carriers that are suitable for communication with C1 may have been unsuitable for communication with C2, due to interference in proximity to C2. C1 uses the modified bitmap it received from C2 to identify which sub-carriers to communicate with C2 (steps 68-72), and can thus commence a data transmission to C2 (step 74).